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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,212	09/26/2003	Kimio Nakayama	243095US0	6831

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EXAMINER

MATZEK, MATTHEW D

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/670,212	Applicant(s) NAKAYAMA ET AL.	
	Examiner Matthew D. Matzek	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-15 and 17-22 is/are pending in the application.
- 4a) Of the above claim(s) 13-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-12 and 17-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. The amendment dated 7/11/2006 has been fully considered and entered into the Record. Claims 3 and 16 have been canceled. Claims 21 and 22 have been added and contain no new matter. Claims 13-15 have been withdrawn from consideration. Claims 1, 2, 4-12 and 17-22 are now active. The rejection of claims 1-12 under 112 second paragraph have been withdrawn due to amendment. Examiner has withdrawn all rejections in view of JP '882 as the applied reference fails to teach the imbedding of pigment in superfine fibers.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4-12, and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeyama et al. (US 6,299,977) in view of Higuchi et al. (US 4,525,169) and Ashida et al. (JP 09059881) and further evidenced by Mast (US 4,914,764).

a. Takeyama et al. teach an artificial leather (Abstract), nonwoven fabric, comprising fiber bundles having a single fineness of no greater than 0.2 denier (0.222 dtex) (col. 3, lines 15-18). The nonwoven fabric is impregnated with polyurethane elastomer comprising a diisocyanate component (Applicant's polymer A with diisocyanate component) (col. 8, lines 25-43). Examiner equates the applied nonwoven fabric to the three-dimensional entangled body of Applicant. The polymer is impregnated in the range of 15-80% of the weight of the nonwoven fabric (col. 9, lines

10-14). This anticipates the ratio of the elastomeric polymer A to the three-dimensional entangled body in the limitation of claim 1. The surface of the artificial leather may contain naps of 40-300 microns, which anticipates the instantly claimed nap lengths (col. 11, lines 5-8). Example 2 is dyed via three different dyes, but Takeyama is silent as to the use of pigments and their quantities for use in coloring the artificial leather article.

b. Higuchi et al. teach artificial grain leather having different color spot groups comprised of ultra fine fibers, in which at least one side of the fibrous substrate has two types of colors provided in a coating layer (Abstract). As demonstrated in Example 1 (col. 8, lines 58-61 and col. 9, lines 28-33) polyurethane with pigments imbedded pigment may be used to impregnate the artificial leather at a level of 0.5 percent. Resins for use in the coating layer comprise polyurethane (polymer A), polyacrylic acid (polymer B), and polyvinyl chloride (polymer C) (col. 5, lines 43-49). The colored coating layer is made of a coating composition in which resins are mixed with pigments. The pigments should not make up more than 30% by weight of the coating (col. 5, lines 59-64). As the pigments are to make up 30% or less of the weight of the coating of the article of Higuchi et al., the pigments of the coating and impregnant together, necessarily meet the compositional limitations instantly claimed by Applicant. Example 3 teaches the use of carbon black (Pigment A), insoluble azo and disazo condensation pigments (Pigments B and C) in a polyurethane vehicle for the coating film layer and a multitude of dyes for the creation of a dyed fabric.

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- c. Since Takeyama et al. and Higuchi et al. are from the same field of endeavor (i.e. artificial leather), the purpose disclosed by Higuchi et al. would have been recognized in the pertinent art of Takeyama et al.
- d. The disclosure of Higuchi et al. is silent as to the size of the pigment particles. It is well known in the art of leather/artificial leather pigmentation that the particle sizes are within the instantly claimed ranges. This is demonstrated by Mast et al., which teaches that pigments for the use of coloring leather are from 0.050 to 0.5 microns (Abstract). The reference explicitly mentions carbon black and azo pigments (col. 1, lines 8-12 and col. 2, lines 39-43).
- e. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to add pigments to elastomer of Takeyama et al. motivated by the desire to create artificial grain leather presenting an entirely new tint with quality appearance and having different color spot groups, which cannot be attained by natural leather (col. 1, lines 56-60).
- f. With regards to claim 6, although Takeyama et al. do not explicitly teach the instantly claimed feature of the elastomer's color fastness, it is reasonable to presume that said property is inherent to Takeyama et al. Support for said presumption is found in the use of like materials (i.e. polyurethane elastomer made from a diisocyanate). The burden is upon Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of the elastomer's color fastness would obviously have been present one the Takeyama et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote (CCPA 1977) as to the providing of this rejection made above under 35 USC

102. Reliance upon inherency is not improper even though rejection is based on Section 103 instead of Section 102. *In re Skoner*, et al. (CCPA) 186 USPQ 80.

g. Claim 7 is rejected as the size of the elastomeric polymer A particle cannot serve as a further limitation in the instantly claimed article as the elastomer melts and impregnates the nonwoven fabric and therefore loses its particle form in the fabricated article.

h. Claim 9 is rejected as the invention of Higuchi et al. teaches the use of pigments in the coating layer (col. 5, lines 59-64) and Takeyama et al. teach the addition of a surface layer comprising elastomeric polymer, which is either the same kind or different kind from the impregnation polymer on the base material (nonwoven, napped fabric) (col. 21, lines 13-18). This results in a grained surface (col. 21, lines 13-15) rejecting claim 12. Claim 11 is rejected as Figure 3 illustrates a discontinuous surface coating resulting in a semi-grained article. Claim 10 is rejected as Higuchi et al. teach that the artificial leather article may be made of a laminate comprising woven, nonwoven and knitted fabrics (Claim 8).

i. Ashida et al. teach the creation of suede-tone artificial leather comprising fiber bundles containing a black pigment reflecting infrared rays. The fiber bundles are made of conjugate ultra-fine polyethylene or nylon fibers containing perylene black (an organic black pigment) in an amount of greater than or equal to 5 percent [structure, page 2]. A nonwoven web of the fiber bundles is impregnated with a polyurethane ratio of 70:30.

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- j. Since Ashida et al. and Takeyama et al. are from the same field of endeavor (i.e. artificial leather), the purpose disclosed by Ashida et al. would have been recognized in the pertinent art of Takeyama et al.
- k. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the fibers of Takeyama et al. with the pigment and percentages disclosed by Ashida et al. The skilled artisan would have been motivated by the desire to create an article that is capable of reflecting infrared rays (Abstract, Ashida et al.).
- l. The relative amount of carbon black is a result-effective variable affecting the blackness of the fibers [0008, page 7]. Consequently, absent a clear and convincing showing of unexpected results demonstrating the criticality of the claimed ratio, it would have been obvious to one of ordinary skill in the art to optimize this result-effective variable by routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).
- m. Claims 21 and 22 are rejected as it would have been obvious to one of ordinary skill in the art at the time the invention was made to have impregnated the pigmented elastomer into the three-dimensional entangled body at either with or without a gradient in the thickness direction. The skilled artisan would have been motivated by the desire to create an article with varied aesthetics. Motivation of this nature is provided in Higuchi et al. (col. 12, lines 21-33) which sets forth that color effects resulting from a combination of different color groups (i.e. high pigment areas versus low pigment areas) results in unprecedented aesthetics.

Response to Arguments

3. Applicant's arguments filed 7/11/2006 have been fully considered but they are not persuasive.

4. Applicant argues that Takeyama et al. is not concerned with any advances in the coloring of leathers and the dyestuff is only present only on the surface of the fine fibers and the impregnated elastomer. Examiner has only relied upon Takeyama et al. as a base reference that sets forth the structure of the artificial leather. The teachings of using pigments in the elastomer and the superfine fibers have been provided by Higuchi et al. and Ashida et al., respectively.

5. Applicant argues that Examiner has improperly relied upon Higuchi et al. for the teaching of pigments being located within the impregnant of the artificial leather and the applied reference only teaches the use of pigmented elastomer on the surface of the artificial leather. As addressed supra Higuchi et al. teach the use of pigmented elastomer as an impregnant and a surface coating.

6. Applicant argues that Higuchi et al. only teach the dyeing of staple, filament, or fibrous sheets by bath dyeing methods and as such fail to teach embedding of the pigments in the fiber and elastomeric polymer. Examiner has only relied upon Higuchi et al. for its teaching of embedding pigments into the elastomeric layer.

7. Applicant argues that Examiner has improperly combined Takeyama et al. and Higuchi et al. because the two references are directed to different types of artificial leather. As addressed supra Higuchi et al. has been relied upon for a teaching of pigmenting the *interior* (emphasis added) of the artificial leather article, not exterior, which is directed to grain-type versus non grain-type artificial leather.

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8. Applicant argues that since Takeyama et al. is not concerned with coloring leathers a combination with Ashida et al. is improper. Examiner has relied upon Ashida et al. for the teaching of imbedding pigment in the superfine fibers and the motivation for such a combination of references.

9. Applicant argues that the comparative examples set forth in the Specification are closer to the instant invention than the applied prior art and demonstrate that the instant invention possesses unexpected properties and superior results. Examiner has reviewed the Specification and while the instant invention yields different results than those of the comparative examples Applicant has failed to demonstrate that such results are in fact unexpected.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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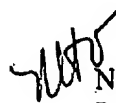
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mdm

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Norca L. Torres-Velazquez
Primary Examiner
Art Unit 1771

9/20/06